

MIL-STD-2078(AS)  
14 DECEMBER 1981

SUPERSEDING  
AR-120  
21 JANUARY 1977

# MILITARY STANDARD

REQUIREMENTS FOR  
PREPARATION OF SUPPORT EQUIPMENT  
DEPOT LEVEL REWORK STANDARDS



AMSC-N3167

FSC MISC

MIL-STD-2078(AS)

14 December 1981

DEPARTMENT OF DEFENSE  
Washington, D.C. 20301

Requirements for Preparation of Support Equipment Depot Level Rework Standards

MIL-STD-2078(AS)

1. This Military Standard is approved for use by Naval Air Systems Command, Department of the Navy, and is available for use by all Departments and Agencies of the Department of Defense.

2. Beneficial comments (recommendations, additions, deletions) and any pertinent data which may be of use in improving this document should be addressed to: Commanding Officer, Naval Air Engineering Center, Engineering Specification and Standards Department (ESSD), Code 93, Lakehurst, NJ 08733, by using the self-addressed Standardization Document Improvement Proposal (DD Form 1426) appearing at the end of this document or by letter.

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FOREWORD

This document supersedes the Naval Air System Command's requirements of AR-120, "Preparation of Ground Support Equipment Rework Specification". MIL-STD-2078(AS) incorporates the depot level rework concept of the Naval Aviation Maintenance Program (NAMP), OPNAVINST 4790.2 and NAVAIRINST 4710.13, "Depot Level Rework Program For Ground Support Equipment End Items".

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1. SCOPE

1.1 Scope. This standard establishes the requirements for format and provides instruction for the preparation of SE depot level rework standards.

1.2 Application. This standard provides guidance to contractors and Government activities for the preparation, publication, distribution and maintenance of depot level rework standards for reparable Support Equipment (SE).





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### 3. DEFINITIONS

3.1 Definitions used in this standard. For the purpose of this standard, the following definitions apply:

3.1.1 Cognizant activity. The cognizant activity is the military activity having management and technical responsibility for the item.

3.1.2 Preparing activity. The contractor or military activity responsible for preparation and maintenance of the SE depot level rework standard.

3.1.3 Nomenclature. The combination of an item name and a type designation.

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#### 4. GENERAL REQUIREMENTS

4.1 SE depot level rework standards. SE depot level rework standards, prepared in accordance with this standard, shall:

- a. Establish uniform minimum standard depot level rework criteria for reparable SE.
- b. Maximize the integrity and reliability of the equipment during its subsequent service period.
- c. Minimize depot level rework costs by eliminating overprocessing.
- d. Provide instructions or reference to approved documents for examination and evaluation, cleaning, disassembly, overhaul, repair, modification, incorporation of technical directives, assembly, testing, calibration, quality assurance, preservation and engineering support for the applicable equipment.
- e. Reflect sound engineering principles and techniques, engineering analysis, rework experience and applicable Maintenance and Material Management (3M) data.

4.2 Service Life Extension Program (SLEP)/Cyclic Overhaul Program (COP). An appendix shall be added to the depot level rework standard for SE scheduled for the SLEP or cyclic overhaul program which shall include instructions for disassembly, corrosion control, paint, overhaul or replacement of components, replacement of wiring and hoses, and incorporation of any outstanding technical directives to ensure configuration control.

4.3 Transposition of text. Locally developed engineering specifications/standards or maintenance engineering directives shall not be referenced in the SE depot level rework standard but applicable data therein shall be transposed to the text.

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## 5. DETAILED REQUIREMENTS

### 5.1 SE depot level rework standards.

5.1.1 Preparation, instructions, and format. SE depot level rework standards shall be in accordance with MIL-STD-962 and the requirements of this standard.

5.1.2 Identification of SE depot level rework standards. SE depot level rework standards are to be identified on a title page by one of the two following general titles:

- a. Aeronautical Avionic SE Depot Level Rework Standard
- b. Aeronautical SE Depot Level Rework Standard

5.1.2.1 Cover/title page. SE depot level rework standards shall have a title page which provides the information delineated in subparagraphs 5.1.2.1.1 and 5.1.2.1.2. The cover page shall be blue in color for avionic SE depot level rework standards and yellow in color for non-avionic SE depot level rework standards.

5.1.2.1.1 Avionic SE depot level rework standard title page. Avionic SE depot level rework standards shall identify the nomenclature, FCSM/Part number of the design activity, and avionic system number of the system the SE supports on the title page as shown in figure 1.

5.1.2.1.2 Non-avionic SE depot level rework standard title page. Non-avionic SE depot level rework standards shall identify the subject SE by nomenclature, model number, part number, national stock number, type equipment code, work unit code, source maintenance and recoverability code, operational logistic support plan number, manufacturer's code and design activity code on the title page as shown in figure 2.

5.1.2.2 Promulgation sheet. The promulgation sheet shall state the date of approval and required statements as on figure 3. The promulgation sheet shall appear in the printed text on the back of the cover page.

5.1.2.3 Avionic SE depot level rework standard document identifiers. Avionic SE depot level rework standards shall be identified by the applicable avionic system number as listed in the Aircraft Material Maintenance Readiness List (AMMRL) preceded by NAVAIR and the official type designation (see MIL-N-18307).

Example: The avionic SE depot level rework standard for Avionic System AXXX, AN/USM-335(V) Test System would bear publication number, NAVAIR - AN/USM-335(V)-AXXX.

Complex avionic systems may require additional standards which shall be identified by NAVAIR and the official type designation for the subsystem, followed by the avionics system number.

Example: The avionic SE depot level rework standard for Avionic System AXXX, RD-342/USM-335(V) Transport, Magnetic Tape, would bear publication number, NAVAIR-RD-342/USM-335(V)-AXXX.

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5.1.2.4 Non-avionic SE depot level rework standard document identifiers. Non-avionic SE depot level rework standards shall be identified by the applicable type equipment code listed in the Operational Logistics Support Plan (OLSP) or the NAVAIRENGCEN SE cross reference list, preceded by NAVAIR and the official type designation for that equipment.

Example: The non-avionic SE depot level rework standard for type equipment code number GPCK, A/S32A-34 Tractor, Aircraft, Towing, would bear publication number NAVAIR-A/S32A-34-GPCK.

5.1.2.5 SE depot level rework standard document identifiers for non-type designated equipment. SE depot level rework standards shall be identified by the applicable type equipment code listed in the Operational Logistic Support Plan (OLSP) or the NAVAIRENGCEN SE Cross Reference List, preceded by NAVAIR- and the item model number.

Example: The SE depot level rework standard for type equipment code number GAC6, model NC-8A, Mobile Electric Power Plant would bear publication number NAVAIR-NC-8A-GAC6.

SE depot level rework standards that are applicable to equipment with more than one type equipment code assigned shall be identified by all applicable type equipment codes listed in ascending alphanumeric sequence preceded by NAVAIR- and the item model number.

Example: The SE depot level rework standard for type equipment codes GGE2, GGJC, GGJQ, GGJS, and GGJV, model AHT-63, Hydraulic Test Stand would bear publication numbers:

NAVAIR-AHT-63 - GGE2  
- GGJC  
- GGJQ  
- GGJS  
- GGJV

5.1.2.6 Document identifiers. Document identifiers, as described in paragraph 5.1.2.3, 5.1.2.4, and 5.1.2.5 shall appear in the top right hand corner on the cover page and at the top center on each numbered page.

5.1.2.6.1 Approval date. The document approval date shall appear directly under the document identifier on the cover page and each numbered page.

5.1.3 Standard text. The text of SE depot level rework standards shall be limited to the models of equipment designated on the title page. When there is a difference between equipment of a given model and that difference is noted only by serial numbers, the text shall indicate to which serial numbers the standard applies (by a subparagraph heading) and shall provide specific instructions which apply to each series of serial numbers.

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5.1.3.1 Item name. When specifying an item by name in SE depot level rework standards the proper item name shall conform to Supply Cataloging Handbook H-6.

5.1.3.2 Reference documents. References to applicable documents, appearing in the text of the SE depot level rework standard, shall be by specific document number with revision letter and applicable paragraph numbers. Documents referenced in text shall also appear in Section 2 "Referenced Documents" (see MIL-STD-962).

5.1.3.3 Notes, cautions, and warnings. When it is required to emphasize important, critical, or hazardous conditions or instructions, special notes, cautions or warnings shall be utilized. Notes may precede or follow the applicable text while cautions and warnings shall immediately precede the requirements to which they refer and shall be selected as follows:

- a. Note. An essential operating or maintenance procedure, condition or useful data which must be highlighted shall constitute a "note".
- b. Caution. An operating or maintenance procedure, practice, condition or statement which, if not strictly observed, could result in damage to or destruction of equipment or loss of mission effectiveness shall constitute a "caution".
- c. Warning. An operating or maintenance procedure, practice, condition or statement which, if not strictly observed, could result in injury to or death of personnel shall constitute a "warning".

5.1.3.4 Safety. SE depot level rework standards shall indicate any special safety precautions to be observed during the performance of the rework requirements in the text.

5.1.3.5 Rework action terms. References to rework actions by use of various terms shall be explicit. As an example, when the term "inspect" is intended to direct a critical examination for certain specified conditions, the term shall be qualified by use of such words as "for cracks, corrosion, or security". When the method of inspection required exceeds the limits of visual inspection, the method (such as dye penetrant, for example), must be specified. When the term "replace" is used to direct the removal of an item, the term shall be qualified to describe and identify the replacing item. If the item is to be replaced with:

- a. a new item,
- b. a like overhauled item, or
- c. the removed item after it has been repaired or overhauled.

The qualifying words shall so describe the action. Rework actions performed on SE under the GAMP shall be specified on the worksheets generated during the GAMP analysis.

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5.1.4 Item identification. Identification of new sets, units, assemblies and parts to be installed shall be in accordance with DOD-STD-100 and MIL-N-18307.

5.1.4.1 Item reidentification. Reidentification of reworked sets, units, assemblies and parts shall be in accordance with DOD-STD-100 and MIL-N-18307.

5.1.5 SE depot level rework standard requirements. SE depot level rework standard requirements shall be described in sections 4 and 5 of the standard and titled "GENERAL REQUIREMENTS" and "DETAILED REQUIREMENTS," respectively.

5.1.5.1 General requirements. The general requirements paragraphs and related subparagraphs of section 4 shall contain the following information:

- a. The inventory, induction inspection, rework processing, inspection, worksheets, test sheets and configuration records which shall be maintained for each unit of SE reworked.
- b. Identification of quality assurance functions and criteria relative to conduct of quality audits.
- c. The reporting requirements when deficiencies are found in the technical data relative to the unit or when any unsatisfactory material/condition exists.

5.1.5.2 Detailed requirements. The detailed requirements paragraphs and subparagraphs of section 5 shall contain the following information in the sequential order shown:

- a. Induction requirements. The induction requirements paragraph and related subparagraphs, pertaining thereto shall contain the following information:
  - (1) Detailed requirements for review of the records received with the unit of SE and the requirement for a complete inventory of the unit when it is received at the rework activity to determine its condition and configuration, including unincorporated technical directives.
  - (2) Requirements for reporting and initiating a new SE custody and maintenance record (OPNAV Form 4790/51) when one is not received with the audit.
- b. SE depot level rework requirements. The SE depot level rework requirements paragraph and related subparagraphs, pertaining thereto shall contain the following information:
  - (1) A general description of the requirements for the accomplishment of SE depot level rework and a listing of special tools, test equipment and materials.
  - (2) Special hardware, non-destructive inspection and cleaning and corrosion control requirements.

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- (3) Detailed instructions for disassembly, examination and evaluation, repair, overhaul, incorporation of technical directives, assembly, lubrication, calibration testing, painting and identification or marking and product verification and certification during the SE depot level rework process.
  - (4) Detailed instructions for scheduled maintenance requirements as determined by the GAMP analysis on selected items of SE.
- c. Post SE depot level rework requirements. The post SE depot level rework requirements paragraph and related subparagraphs, pertaining thereto, shall contain the following information:
- (1) Requirements for maintaining the SE Custody and Maintenance Record.
  - (2) Requirements for instructions for preparing a "noted but not corrected" list.
  - (3) Requirements for the final inspection and review of the rework records to ensure agreement of identification, serial number, completeness of forms, correctness of entries and other pertinent requirements.
  - (4) Instructions for identification of the rework performed on the SE.
  - (5) Instructions for preservation and packaging for storage or shipment of the SE.
- d. Engineering requirements. The Engineering requirements paragraph and related subparagraphs, pertaining thereto, shall contain the following information:
- (1) Requirements for engineering support relative to the SE depot level rework standard.
  - (2) Requirements for the documentation and forwarding of all engineering decisions relative to the SE depot level rework standard.

5.1.5.3 Appendix. Avionic SE depot level rework standards shall have an appendix containing a SE depot level rework checklist to verify rework performed and an AVIONIC SE UPDATE/REWORK/ VERIFICATION REPORT (11ND-NALC-4710/25) form for the applicable avionic system.

5.1.6 Revisions to SE depot level rework standards. When necessary, due to change in the state of the art or requirements, the cognizant activity will authorize the preparing activity to revise, change or cancel the depot level rework standard in accordance with MIL-STD-962, except for the location of the revision letter which shall be shown directly under the document identifier.

Example: NAVAIR-A/532A-34-GPCK  
Revision A  
20 January 1981

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A revision block shall be shown on back of cover page, directly under last paragraph of promulgation sheet, for the purpose of retaining a permanent record of revisions to the SE depot level rework standard. (See Figure 3.)

5.1.6.1 Page revisions. Minor changes in a SE depot level rework standard shall be made by preparing a change notice as described in MIL-STD-962.

5.1.7 SE depot level rework standard submittal. The contractor shall provide the SE depot level rework standard in accordance with Appendix A and the Contract Data Requirement List (CDRL-DD Form 1423).

5.1.8 SE depot level rework standard distributions. SE depot level rework standards shall be printed in the quantities and distributed in accordance with CDRL.



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6. NOTES

6.1 Contractual requirements. To assure correct application of this standard, Request for Proposals and contractual statements of work should include the requirements of sections 4 and 5, as tailored by the procuring activity, to ensure that only the minimum requirements necessary are contractually applied.

Preparing activity:  
Navy - AS  
(Project No. MISC-ND61)

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NAVAIR-RD-342/USM-335(V)-AXXX  
20 JANUARY 1981

AERONAUTICAL AVIONIC  
SUPPORT EQUIPMENT  
DEPOT LEVEL  
REWORK STANDARD

TRANSPORT, MAGNETIC TAPE

DESIGN ACTIVITY  
FSCM-PART NO.

77327-7006600

AVIONIC SYSTEM NO.

AXXX

FIGURE 1. Cover page - avionic SE depot level rework standard

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NAVAIR -A/S32A-34-GPCK  
20 JANUARY 1981

**AERONAUTICAL  
SUPPORT EQUIPMENT  
DEPOT LEVEL  
REWORK STANDARD**

**AIRCRAFT TOWING TRACTOR, GASOLINE**

<u>MODEL NO.</u>	<u>PART NO.</u>	<u>NSN</u>
T-180F	TA-18	6RX1740-00-925-8212
<u>TYPE EQUIPMENT CODE</u>	<u>WUC</u>	<u>SM &amp; R CODE</u>
GPCK	23BQ0	PEOHD
<u>OLSP NO.</u>	<u>MFG CODE</u>	<u>DESIGN ACTIVITY CODE</u>
CGSE-0135:AA: Change 1 Dated 16 Feb 1979	29510	28638

FIGURE 2. Cover page - non-avionic SE depot level rework standard

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NAVAIR-A/532A-34-GPCK  
20 January 1981

Naval Air Systems Command  
Washington, DC 20361

Aeronautical Avionic Support Equipment Depot Level Rework Standard, Transport,  
Magnetic Tape

NAVAIR-A/S32A-34-GPCK

1. This SE depot level rework standard is approved for use by the Naval Air Systems Command, Department of the Navy, and is available for use by all Departments and Agencies of the Department of Defense. Transmittal of this document outside the Department of Defense must have approval of the issuing service.
2. Beneficial comments (recommendations, additions, deletions) and any pertinent data which may be of use in improving this document shall be addressed to: Commander, Naval Air Systems Command, AIR-417, Washington, DC 20361.

REVISIONS		
LTR	DESCRIPTION	DATE

FIGURE 3. Example of Promulgation Sheet.

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APPENDIX A

DATA REQUIREMENTS

10. GENERAL.

10.1 Scope. This appendix identifies the data requirements applicable to this standard.

10.2 Purpose. Data requirements of this standard are deliverable as specified in the contract. This appendix identifies the data required to prepare a SE depot level rework standard.

20. REFERENCE DOCUMENTS.

Not applicable.

30. DEFINITIONS.

Not applicable.

40. GENERAL REQUIREMENTS.

Not applicable.

50. DETAIL REQUIREMENTS.

50.1 Data. When this standard is used in a procurement which incorporates a DD Form 1423 and invokes the provisions of 7-104.9(n) of the Defense Acquisition Regulations, the data requirements identified below will be developed as specified by an approved Data Item Description (DD Form 1664) and delivered in accordance with the approved Contract Data Requirements List (DD Form 1423) incorporated into the contract. When the provisions of ASPR-7-104.9(n) are not invoked, the data specified below will be delivered by the contractor in accordance with the contract requirements. Deliverable data required by this standard is cited in the following paragraphs:

Paragraph	Data Requirement	Applicable DID
4.1, 5.1, 5.1.7	SE depot level rework standard	DI-L-21575

(Copies of data item descriptions required by the contractors in connection with specific procurement functions should be obtained from the procuring activity or as directed by the contracting officer.)



**INSTRUCTIONS:** In a continuing effort to make our standardization documents better, the DoD provides this form for use in submitting comments and suggestions for improvements. All users of military standardization documents are invited to provide suggestions. This form may be detached, folded along the lines indicated, taped along the loose edge (*DO NOT STAPLE*), and mailed. In block 5, be as specific as possible about particular problem areas such as wording which required interpretation, was too rigid, restrictive, loose, ambiguous, or was incompatible, and give proposed wording changes which would alleviate the problems. Enter in block 6 any remarks not related to a specific paragraph of the document. If block 7 is filled out, an acknowledgement will be mailed to you within 30 days to let you know that your comments were received and are being considered.

**NOTE:** This form may not be used to request copies of documents, nor to request waivers, deviations, or clarification of specification requirements on current contracts. Comments submitted on this form do not constitute or imply authorization to waive any portion of the referenced document(s) or to amend contractual requirements.

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DEPARTMENT OF THE NAVY  
Commanding Officer  
Naval Air Engineering Center  
Systems Engineering Standardization Department  
(SESD), Code 93  
Lakehurst, NJ 08733

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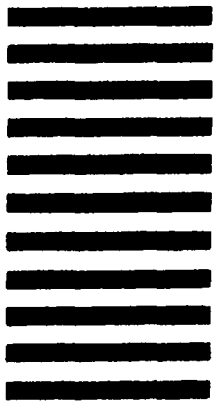
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ATTN: TJM (9322)



## STANDARDIZATION DOCUMENT IMPROVEMENT PROPOSAL

*(See Instructions - Reverse Side)*

1. DOCUMENT NUMBER

2. DOCUMENT TITLE

3a. NAME OF SUBMITTING ORGANIZATION

4. TYPE OF ORGANIZATION *(Mark one)* VENDOR USER MANUFACTURER OTHER *(Specify):* \_\_\_\_\_b. ADDRESS *(Street, City, State, ZIP Code)*

## 5. PROBLEM AREAS

a. Paragraph Number and Wording:

b. Recommended Wording:

c. Reason/Rationale for Recommendation:

## 6. REMARKS

7a. NAME OF SUBMITTER *(Last, First, MI)* - Optionalb. WORK TELEPHONE NUMBER *(Include Code)* - Optionalc. MAILING ADDRESS *(Street, City, State, ZIP Code)* - Optional

8. DATE OF SUBMISSION (YYMMDD)

DD FORM 1426  
82 MAR

PREVIOUS EDITION IS OBSOLETE.

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